

OR170420

Optical sensors • Retro-reflective sensors

sensor optical, reflective, 50x50x15mm, Polarized red light, Point, Sn: 7000, 10-30V DC, PNP Anticoincidence, Connector M12 4pin, IP67, Zinc die-cast+PMMA, With polarizing filter



Optical sensors function contactlessly. They detect objects independent of their characteristics (e.g., shape, color, surface structure, material). The basic operating principle is based on the transmission and reception of light. There are three different versions: 1. The through-beam sensor consists of two separate devices, a transmitter and a receiver that are aligned with one another. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. With the retro-reflective sensor, the transmitter and receiver are located in one device. The emitted light beam is reflected back to the receiver by a reflector that is to be mounted opposite the device. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. With the diffuse reflection sensor, the transmitter and receiver are in one device. The emitted light beam is reflected by the object that is to be detected. As soon as the receiver detects the reflected light, the switching output integrated in the device changes its status.

Electrical features

Response/decay time	1 ms
Display	LED display
Type of switching function	Exclusive-OR
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	200 mA
Short-circuit protection	Yes
No-load current	36 mA
Number of pins	4
Switching distance	0 - 7000 mm
Switching frequency	500 Hz
Voltage drop	1.8 V
Scanning function	Light-/dark-on mode
Reverse polarity protection	Yes
Decay time	1 ms
Operating voltage (DC)	10 - 30 V
With polarizing filter	Yes
Interference suppression	Yes

Mechanical features

Design	Cuboid
Width	15.4 mm
Height	50 mm
Length	50 mm
Degree of protection (IP)	IP67
Active area material of sensor	Plastic (PMMA)
Housing material	Zinc die-cast
Ambient temperature	-25 - 65 °C

Optical features

Light source	Polarized red light
Light beam form	Point
Wavelength of the sensor	660 nm

Other features

Reference medium / object	AO000007
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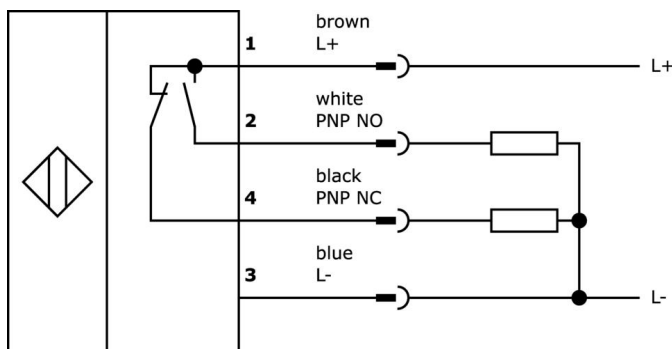
Classification

ETIM 8	EC002717 Retro-reflective sensor
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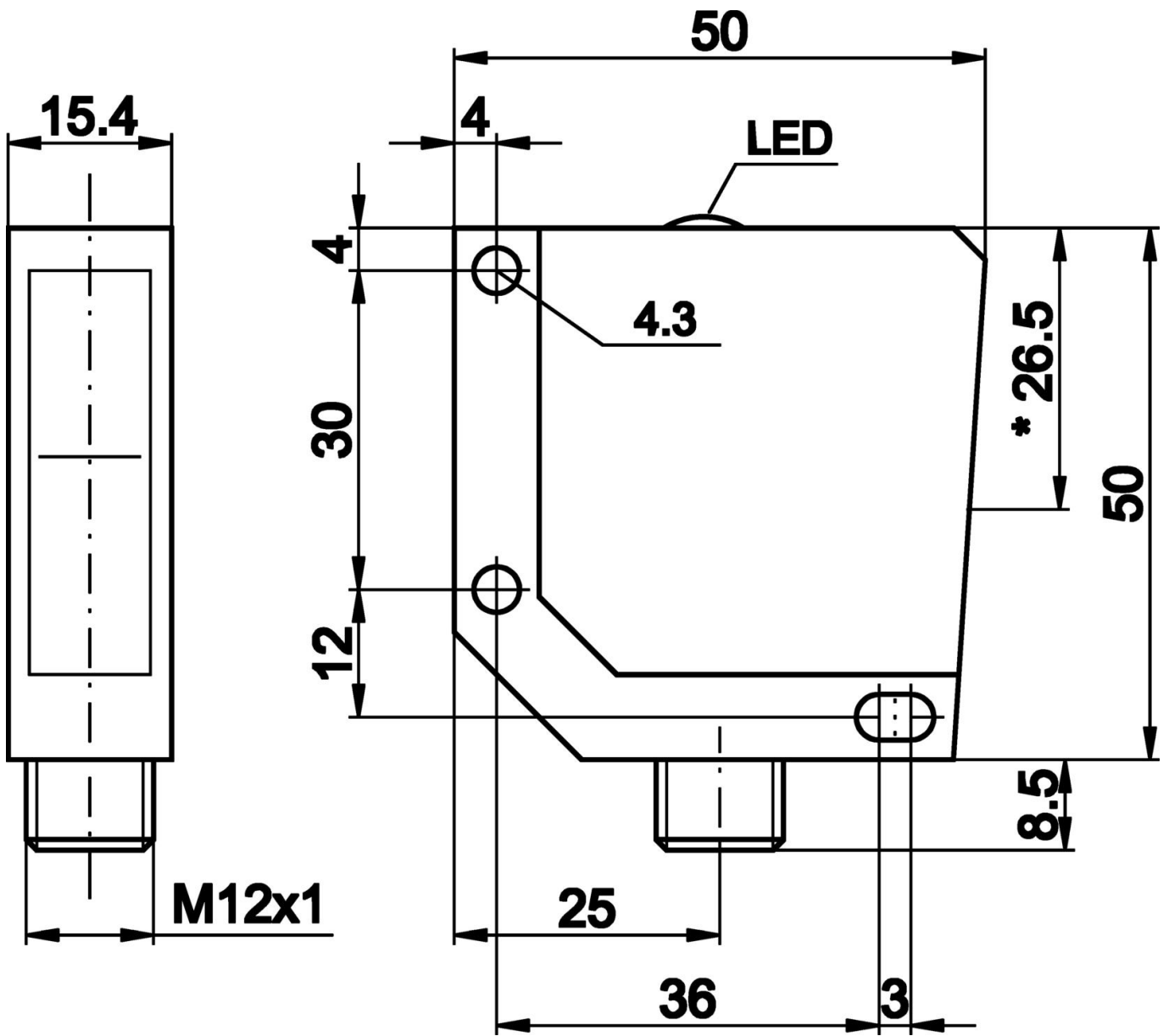
More

IPF Product Group	100 optical sensors
packaging dimensions	123 x 77 x 25 mm
gross weight	120 g
Customs tariff number	85365019
WEEE number	40951076
OzDS-compliant	Yes
POP-compliant	Yes
Reach-compliant	Yes
RoHS-compliant	Yes

Connection



Dimensional drawing



Extract accessories program

AY000119



accessories sensor, Fixture kit,
Metal, ball joint

AY000162



Accessories, magnetic, Ø43mm,
neodymium-iron-boron, inside
thread M5, rubber

AV000084



accessories, Mounting angle
bracket, 50x30x84mm, Angle,
Steel

AO000004



accessories optical, reflector,
Ø20mm 6high, Self-adhesive,
PMMA+PMMA, Polarized

AO000005



accessories optical, reflector,
Ø40mm 7high, Self-adhesive,
PMMA+PMMA, Polarized

VK030F23



Connection cable, 0.3m, M12
socket 4-pin angular, M12
connector 4-pin straight, 4x0.
34mm², PUR (polyurethane), IP67,
LED, suitable for trailing chain and
torsion resistant, oils and cooling
lubricants, welding area, silicone-
free

VK030F26



Connection cable, 0.3m, M12
socket 4-pin straight, M12
connector 4-pin straight, 4x0.
34mm², PUR (polyurethane), IP67,
LED, suitable for trailing chain and
torsion resistant, oils and cooling
lubricants, welding area, silicone-
free

VK003020



Cable socket, angular, self-
assembly, screw connection, Ø3-6.
5mm, 4A, 240V, -25-90°C, M12
socket 4-pin, IP67, PBT

VK003024



Cable socket, Straight, Suitable for
self-assembly, Screw connection,
Ø3-6.5mm, 4A, 240V, -25-90°C,
M12 Female (socket) 4pin, IP67,
PBT

You can find further accessories on our homepage



Installation

Mounting / installation may only be carried
out by a qualified electrician!



Disposal

WEEE number according to § 6 para. 3
ElektroG: 40951076

Safety warnings

/ Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.

/ Never use these devices in applications where the safety of a person depends on their functionality.